

Music Store Analysis

Problem Statement

The music store aims to optimize its business strategies and enhance customer engagement by analyzing its data. They want analysis that will provide insights about employee hierarchy, invoice distribution, customer spending patterns, and music preferences.

By understanding these aspects, the store can identify top-performing employees, target high-revenue cities for promotions, understand customer preferences for personalized marketing, and recognize popular music genres and artists.

These insights will drive more informed decision-making and contribute to the store's growth and customer satisfaction.



Music Store Analysis



Q1: Who is the senior most employee based on job title?

```
select title , first_name , last_name from employee order by levels desc limit 1;
```

	title	first_name	last_name
▶	General Manager	Andrew	Adams



Music Store Analysis

Q2: Which countries have the most Invoices?

```
select billing_country as "Country" from invoice group by billing_country order  
by count(invoice_id) desc limit 1;
```

	Country
▶	USA



Music Store Analysis



Q3: What are top 3 values of total invoice?

Select

```
invoice_id,customer_id,invoice_date,billing_address,billing_city,billing_country,billing_postal_code,total from
(select * , dense_rank() over(order by total desc) as Ranking from invoice ) as T1
where Ranking<4;
```

	invoice_id	customer_id	invoice_date	billing_address	billing_city	billing_country	billing_postal_code	total
▶	183	42	2018-02-09 00:00:00	9, Place Louis Barthou	Bordeaux	France	33000	23.759999999999998
	31	3	2017-02-21 00:00:00	1498 rue BÃ©langer	MontrÃ©al	Canada	H2G 1A7	19.8
	92	32	2017-07-02 00:00:00	696 Osborne Street	Winnipeg	Canada	R3L 2B9	19.8
	362	29	2019-05-24 00:00:00	796 Dundas Street West	Toronto	Canada	M6J 1V1	19.8
	526	5	2020-06-08 00:00:00	Klanova 9/506	Prague	Czech Republic	14700	19.8
	276	22	2018-09-07 00:00:00	120 S Orange Ave	Orlando	USA	32801	18.81



Music Store Analysis



Q4: Which city has the best customers? We would like to throw a promotional Music Festival in the city we made the most money. Write a query that returns one city that has the highest sum of invoice totals.

Return both the city name & sum of all invoice totals.

```
select billing_city,sum(total) as Total_Invoices from invoice group by billing_city  
order by Total_Invoices desc limit 1;
```

	billing_city	Total_Invoices
▶	Prague	273.24000000000007



Music Store Analysis



Q5: Who is the best customer? The customer who has spent the most money will be declared the best customer.

Write a query that returns the person who has spent the most money.

```
select concat(c.first_name," ",c.last_name) as "Customer_Name",sum(total) as  
Total_Invoices from invoice i inner join customer c on  
i.customer_id=c.customer_id group by 1 order by Total_Invoices desc limit 1 ;
```

	Customer_Name	Total_Invoices
▶	František Wichterlov	144.54000000000002



Music Store Analysis



Q6: Write query to return the email, first name, last name, & Genre of all Rock Music listeners.

Return your list ordered alphabetically by email starting with A.

```
select distinct(a.email),concat(a.first_name,a.last_name) as
"Full_Name",e.name from customer as a
inner join invoice as b on a.customer_id=b.customer_id
inner join invoice_line as c on b.invoice_id=c.invoice_id
inner join track as d on c.track_id=d.track_id
inner join genre as e on d.genre_id=e.genre_id
where e.name="Rock" order by a.email;
```

	email	Full_Name	name
▶	aaronmitchell@yahoo.ca	AaronMitchell	Rock
	alero@uol.com.br	AlexandreRocha	Rock
	astrid.gruber@apple.at	AstridGruber	Rock
	bjorn.hansen@yahoo.no	BjörnHansen	Rock
	camille.bernard@yahoo.fr	CamilleBernard	Rock
	daan_peeters@apple.be	DaanPeeters	Rock
	diego.gutierrez@yahoo.ar	DiegoGutiérrez	Rock
	dmiller@comcast.com	DanMiller	Rock
	dominiquelefebvre@gmail.com	DominiqueLefebvre	Rock
	edfrancis@yahoo.ca	EdwardFrancis	Rock
	eduardo@woodstock.com.br	EduardoMartins	Rock
	ellie.sullivan@shaw.ca	EllieSullivan	Rock
	emma_jones@hotmail.com	EmmaJones	Rock
	enrique_munoz@yahoo.es	EnriqueMuñoz	Rock

Many more entries..



Music Store Analysis



Q7: Let's invite the artists who have written the most rock music in our dataset. Write a query that returns the Artist name and total track count of the top 10 rock bands.

```
select max(a.name) as Name , count(track_id) as Total_tracks from artist a
inner join album al on a.artist_id=al.artist_id
inner join track t on al.album_id=t.album_id
inner join genre g on t.genre_id=g.genre_id where g.name like "Rock"
group by a.artist_id order by Total_tracks desc limit 10;
```

	Name	Total_tracks
▶	AC/DC	18
	Aerosmith	15
	Audioslave	14
	Led Zeppelin	14
	Alanis Morissette	13
	Alice In Chains	12
	Frank Zappa & Captain Beefheart	9
	Accept	4



Music Store Analysis



Q9: Find how much amount spent by each customer on artists?

Write a query to return customer name, artist name and total spent but only for best selling artist.

with cte as (

```
select a.name,a.artist_id,sum(il.unit_price*il.quantity) as Total_Price from artist a
inner join album al on a.artist_id=al.artist_id
inner join track t on al.album_id=t.album_id
inner join invoice_line il on t.track_id=il.track_id
group by 1,2 order by Total_Price desc
limit 1) -- gets that best selling artist
```

```
select c.first_name as Customer_Name,cte.name as
Artist_Name,sum(il.unit_price*il.quantity) as Total_Value from
customer c inner join invoice i on i.customer_id=c.customer_id
inner join invoice_line il on il.invoice_id=i.invoice_id
inner join track t on t.track_id=il.track_id
inner join album al on al.album_id=t.album_id
inner join cte on al.artist_id=cte.artist_id
group by 1,2
order by Total_Value desc;
-- - get customer wise money for that best selling artist
```



Music Store Analysis



Q9: Find how much amount spent by each customer on artists?
Write a query to return customer name, artist name and total spent but only for best selling artist.

	Customer_Name	Artist_Name	Total_Value
▶	Steve	AC/DC	17.82
	Phil	AC/DC	10.89
	Kathy	AC/DC	10.89
	Frank	AC/DC	10.89
	Stanisław	AC/DC	9.9
	Luís	AC/DC	7.9200000000000001
	Martha	AC/DC	3.96
	Helena	AC/DC	2.9699999999999998
	Terhi	AC/DC	2.9699999999999998
	Madalena	AC/DC	2.9699999999999998
	Wyatt	AC/DC	2.9699999999999998
	Niklas	AC/DC	2.9699999999999998
	Kara	AC/DC	1.98
	João	AC/DC	1.98
	Patrick	AC/DC	1.98
	Luis	AC/DC	1.98
	Dan	AC/DC	1.98
	Edward	AC/DC	1.98
	Mark	AC/DC	1.98
	František	AC/DC	1.98
	Tim	AC/DC	0.99

Many more entries..



Music Store Analysis

Q10: We want to find out the most popular music Genre for each country. We determine the most popular genre as the genre with the highest amount of purchases. Write a query that returns each country along with the top Genre. For countries where the maximum number of purchases is shared return all Genres.

```
with ct as(select c.country,g.name as Genre_Name,count(iL.quantity) as
Total_Tracks ,dense_rank() over(partition by c.country order by count(iL.quantity)
desc) as Ranking
from customer c
inner join invoice i on c.customer_id=i.customer_id
inner join invoice_line iL on iL.invoice_id=i.invoice_id
inner join track t on t.track_id =iL.track_id
inner join genre g on g.genre_id=t.genre_id group by 1,2)
select country,Genre_Name,Total_Tracks from ct where Ranking=1 ;
```



country	Genre_Name	Total_Tracks
Argentina	Rock	1
Australia	Rock	18
Austria	Rock	6
Belgium	Rock	5
Brazil	Rock	26
Canada	Rock	57
Chile	Rock	7
Czech Republic	Rock	14
Denmark	Rock	6
Finland	Rock	6
France	Rock	26
Germany	Rock	28
Hungary	Rock	4
India	Rock	13
Ireland	Rock	2
Italy	Rock	3
Netherlands	Rock	6
Norway	Metal	2
Poland	Rock	14
Portugal	Rock	23
Spain	Metal	4
Sweden	Rock	5
United Kingdom	Rock	47
USA	Rock	70



Music Store Analysis



Q11: Write a query that determines the customer that has spent the most on music for each country.

Write a query that returns the country along with the top customer and how much they spent. For countries where the top amount spent is shared, provide all customers who spent this amount.

```
with cvt as (  
  select c.country,c.first_name as Name , sum(il.unit_price*il.quantity) as  
  Total_Price ,dense_rank() over(partition by c.country order by  
  sum(il.unit_price*il.quantity) desc)as Ranking  
  from customer c  
  inner join invoice i on c.customer_id=i.customer_id  
  inner join invoice_line il on i.invoice_id=il.invoice_id  
  group by 1,2)  
  select country,Name,round(Total_Price,2) as Total from cvt where Ranking=1;
```

	country	Name	Total
▶	Argentina	Diego	39.6
	Australia	Mark	81.18
	Austria	Astrid	69.3
	Belgium	Daan	60.39
	Brazil	LuÃ-s	108.9
	Canada	FranÃois	99.99
	Chile	Luis	97.02
	Czech Republic	FrantiÅek	144.54
	Denmark	Kara	37.62
	Finland	Terhi	79.2
	France	Wyatt	99.99
	Germany	Fynn	94.05
	Hungary	Ladislav	78.21
	India	Manoj	111.87
	Ireland	Hugh	114.84
	Italy	Lucas	50.49
	Netherlands	Johannes	65.34
	Norway	BjÃrn	72.27
	Poland	StanisÅaw	76.23
	Portugal	JoÃo	102.96
	Spain	Enrique	98.01
	Sweden	Joakim	75.24
	United Kingdom	Phil	98.01
	USA	Frank	145.53



Music Store Analysis

Insights & Scope of improvement



- Andrew Adams is senior-most employee & can be used to mentor junior employees and to shape succession planning.
- As USA is country with most invoices hence, focusing marketing efforts and resources can increase market penetration.
- As Prague makes the most money(\$273.24) we can throw a promotional Music Festival there.
- We can develop personalized marketing and exclusive offers for František Wichterlov who is the best customer to encourage even higher spending.
- We can feature AC/DC, Aerosmith and other top rock artists in promotions and events to attract their fan base and boost sales and mention top rock series customer like Aaron, Alexander and Astrid that will attract other customer to buy more rock music. or we can create targeted marketing strategies, offering exclusive content or merchandise to these to high-spending customers.



- Overall Rock is most selling genre so we can add more of its tracks to inventory to increase sales.
- We can implement country-specific loyalty programs and exclusive rewards for top-spending customers to increase retention and spending.